

Audubon Sugar Institute (ASI)
■
Fifth Annual Practical Short Course
■
**Affinity -Based Separation Technologies:
Existing Applications
and New Challenges**

May 12-13, 2011
Hilton Montreal Bonaventure
Montreal, Canada



Audubon Sugar Institute
Louisiana State University Agricultural Center
3845 Highway 75
Saint Gabriel, LA 70776
Tel 225-642-0135 Fax 225-642-8790



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**Affinity -Based Separation Technologies:
Existing Applications
and New Challenges**

Topics Covered by the Short Course

- Major applications and case studies of ion exchange, adsorption and large-scale chromatography in sugar, biotechnology, chemical processing, sweeteners, pharmaceutical and other industries.
- Basic principles of ion exchange, adsorption, large-scale industrial chromatography as well as system design, equipment configurations, process economics and practical applications.
- Special focus on the challenges of emerging industry of renewable fuels and chemicals.
- New advances in equipment, media and process design for ion-exchange, large-scale chromatography technologies/developments.
- Overview of membrane filtration technology and its use as pre- and post treatment to resin technologies for the food, sugar, sweetener and biotech industries.
- Networking opportunities with the leading experts in the industry.



Who Should Attend

The short course instructors will provide basic information required for understanding, operation and process design related to affinity-based separation technologies utilizing fine-granulated media (e.g. ion exchange resins). In addition, case studies will be discussed covering a broad range of applications in sugar, sweetener, renewable energy, food, chemical, pharmaceutical and water treatment industries. Special attention will be paid to the challenges posed by the emerging industry of biomass conversion to fuels and chemicals. The course provides opportunities to create your own network of experts and industry suppliers and obtain information on all aspects of resin-based processes, starting from bench scale studies and all the way to commercialization. The course is focused on practical aspects of affinity-based technologies required for successful integration into industrial processes.

Registration

Complete registration form and send with payment to:
(Attn: Iryna Tishechkina)
Audubon Sugar Institute
3845 Highway 75
St. Gabriel, LA 70776, USA
Registration Fee: \$750
(Early Bird Special: \$650 if received by **April 1, 2011**)

Special Rates

A discount of 15% is given to companies sending two or more representatives and a 25% discount for personnel from Louisiana sugar mills. A special rate of \$250 for LSU students will be applied.

Cancellation Policy

ASI reserves the right to cancel this course in case of insufficient support. In this event, you will be notified immediately. ASI is not responsible for the purchase of nonrefundable airline tickets or the cancellation/change of fees associated with cancelling a flight.

Venue

The course will be held in the heart of downtown Montreal, Quebec, Canada at the Hilton Montreal Bonaventure (www.hiltonmontreal.com)

Accommodations

Rooms have been blocked at the Hilton Montreal Bonaventure for course participants at the special group rate (please mention the **Audubon Sugar Institute**) of \$199+taxCAD per night which will be available for reservations made before **April 15, 2011**. Reserve your room by calling the hotel at 514-878-2332 or 1-800-267-2575.

Day 1 Thursday, May 12, 2011

- 8:00 AM Welcome and Introductions
Increasing Importance of Affinity- Based Separation Technologies - Vadim Kochergin, Professor, Audubon Sugar Institute, Louisiana State University Agricultural Center, USA
- 8:20 AM Architecture and Application of Porous Organic Polymers - Bob Albright, President, Albright Consulting, USA
- 9:05 AM Ion Exchange Resins and Membranes for Food Processing - Steve Pease, Business Development Manager, Dow Water and Process Solutions, USA
- 9:50 AM Coffee break
- 10:20 AM High Surface Area Ion Exchange Technology - Craig J. Brown, President, Chemionex Inc., Canada
- 11:05 AM The ISMB Ion Exclusion Chromatography Technology: Practical Examples of Its Benefits and Economics - Daniel H. Bar, VP/ General Manager, Ameridia, USA
- 11:50 AM Lunch (catered)
- 1:15 PM Feedstock Purification for Catalytic Conversion of Carbohydrates to Hydrocarbons—New Developments and Challenges - Andrew Held, Director, Process Engineering, Virent Energy Systems, Inc., USA
- 2:00 PM Process Symmetry Principles - Mike Kearney, Director of New Technology, Amalgamated Research Inc. (ARi), USA
- 2:45 PM Break - Refreshments
- 3:15 PM Sequential Simulated Moving Bed (SSMB) to Continuous Ion Exchange—HFCS to Bio-applications - Brian Burriss, Process Design Manager; John Bhatt, Industrial Biotech Director; Stanislas Baudouin, Sr. Scientist R&D, Novasep, France
- 4:00 PM Membrane Filtration as Pre- and Post Treatment for Resin Technologies - Mike Grigus, Sr. Sales Engineer, GEA Filtration, USA
- 6:00 PM Reception

Day 2 Friday, May 13, 2011

- 8:00 AM The Challenges of Ion Exchange Development: The User Perspective - Dennis Walthew, Technical Manager, Tongaat- Hulett Sugar, Republic of South Africa
- 8:45AM Fractal Shallow Bed (FSB) Technology - Oliver Tzschätzsch, Managing Director, Escon, GmbH, Germany
- 9:30 AM Coffee break
- 10:00 AM Economics of Decolorization with Ion Exchange Resin and Membrane Regenerant Recovery - Dennis Burke, President, ProSep LTD, USA; Terry Dillman, Integration Separation Technologies, USA
- 10:45AM Ion Exchange and Industrial Chromatographic Equipment—Design, Manufacturing, Operation and Control Issues - Mark Suhr, President, MS Process Technologies, USA
- 11:30 AM Lunch (catered)
- 1:00 PM The Use of Ion Exchange Resins as Enzyme Carriers - Rick Muschi and Anthony Sokol, Sales Managers, ITOCHU Chemicals, USA
- 1:45PM Carbon Adsorption Technologies - Brad Ahlgren, Sales Manager, Calgon Carbon Corporation/ GSV, USA
- 2:30 PM Break - Refreshments
- 3:00 PM Novel Cleaning Procedure for Ion Exchange Resins in Sugar Processing - Bill Bornak, Vice-President Technology, Recirculation Technologies Inc. (RTI), USA
- 3:45 PM Discussion and Concluding Remarks

PDU's

As an institution of higher education, ASI offers short courses intended to advance professional and technical competence of participants. Courses meet the requirements for PE CPD in Louisiana. This course qualifies for 14 PDH credits. Certificates of completion will be issued at the end of the course. Refer to the guidelines stipulated by the license-issuing board to verify applicability.

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Hilton Montreal Bonaventure

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Name _____
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Payment Method Check

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Credit Card

My credit card information is as follows:

Credit Card Type Visa MasterCard American Express

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Credit Card Expiration Date _____

Name on Credit Card _____

Credit Card Billing Address _____

Once your registration and payment are received, you will be sent a confirmation notice via e-mail.

Audubon Sugar Institute reserves the right to restrict numbers as necessary or cancel a course if there is insufficient support.

Information on this course is available on our website at www.lsuagcenter.com/audubon.

For additional information, please send inquiries to itish@agcenter.lsu.edu or vkochergin@agcenter.lsu.edu or telephone 225-642-0135, extension #240 or #236.